



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,654	11/27/2001	Per Pedersen	1076.40921X00	8106

20457 7590 11/03/2004

ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-9889

EXAMINER

PHAM, TUAN

ART UNIT	PAPER NUMBER
----------	--------------

2643

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,654

Applicant(s)

PEDERSEN ET AL.

Examiner

TUAN A PHAM

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

2. As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1- 4, 6-8, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Hawker et al. (U.S. Patent No.: 5,790,679, hereinafter, "Hawker").

Regarding claims 1 and 11, Hawker teaches a mobile telecommunications device (see figure 1, terminal 10) and method comprising a casing (see figure 1, case 12), an earpiece (i.e., receiver transducer) (see figure 1, receiver transducer 20), and a cover (i.e., enclosure) associated with The earpiece to define a resonant cavity between the earpiece and the casing (see figure 3, enclosure 26, transducer 20, col.2, ln.35-39, col.3, ln.37-45), wherein the cover has an opening therein for the transmission of sound from the earpiece via the cavity into an acoustic path formed between the casing and the cover (see figure 3, opening 34, col.3, ln.1-45).

Regarding claim 2, Hawker further teaches a mobile telecommunications device wherein the acoustic path extends laterally away from the earpiece between the casing and the cover (see figure 3, front chamber 30; transducer 20, col.3, ln.37-45).

Regarding claim 3, Hawker further teaches a mobile telecommunications device wherein the cover is spaced from the earpiece by a gasket (i.e., acoustic screen)(see figure 3, acoustic screen 50, col.3, ln.37-41).

Regarding claim 4, Hawker fails to explicitly teach the cover is a metal plate that extends over the substrate. However, Hawker teaches the cover can be made by plastics. Therefore, the cover can be made by metal is inherently.

Regarding claim 6, Hawker further teaches a mobile telecommunications device wherein the resonant cavity is partially formed by a depression in the plate (see figure 3, front enclosure).

Regarding claim 7, Hawker further teaches a mobile telecommunications device wherein the acoustic path between the casing and the cover is configured to increase internal leak of sound generated by the earpiece to improve the leak tolerance of the device (see col.1, ln.41-49).

Regarding claim 8, Hawker further teaches a mobile telecommunications device wherein the casing has a plurality of apertures therein for the external transmission of sound from the device via the resonant cavity and the acoustic path (see figure 1, apertures 40, col.3, ln.17-36).

Regarding claims 10 and 12, Hawker further teaches a mobile telecommunications device and method comprising a mobile telephone (see figure 1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hawker et al. (U.S. Patent No.: 5,790,679, hereinafter, "Hawker") in view of Jonsson et al. (U.S. Patent No.: 5,963,434, hereinafter, "Jonsson").

Regarding claim 5, Hawker teaches a mobile telecommunications device (see figure 1, terminal 10) and method comprising a casing (see figure 1, case 12), an earpiece (i.e., receiver transducer) (see figure 1, receiver transducer 20), and a cover (i.e., enclosure) associated with The earpiece to define a resonant cavity between the earpiece and the casing (see figure 3, enclosure 26, transducer 20, col.2, ln.35-39, col.3, ln.37-45), wherein the cover has an opening therein for the transmission of sound

from the earpiece via the cavity into an acoustic path formed between the casing and the cover (see figure 3, opening 34, col.3, ln.1-45).

It should be noticed that Hawker fails to clearly teach the substrate is a lightguide assembly. However, Jonsson teaches such features (see figure 1, lightguide 14, col.1, ln.10-38) for a purpose of securing the lightguide.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the substrate is a lightguide assembly, as taught by Jonsson, into view of Hawker in order to easy for assembly.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hawker et al. (U.S. Patent No.: 5,790,679, hereinafter, "Hawker") in view of Peng (Pub. No.: US 2002/0197965).

Regarding claim 9, Hawker teaches a mobile telecommunications device (see figure 1, terminal 10) and method comprising a casing (see figure 1, case 12), an earpiece (i.e., receiver transducer) (see figure 1, receiver transducer 20), a cover (i.e., enclosure) associated with The earpiece to define a resonant cavity between the earpiece and the casing (see figure 3, enclosure 26, transducer 20, col.2, ln.35-39, col.3, ln.37-45), wherein the cover has an opening therein for the transmission of sound from the earpiece via the cavity into an acoustic path formed between the casing and the cover (see figure 3, opening 34, col.3, ln.1-45), and the casing has a plurality of apertures therein for the external transmission of sound from the device via the resonant cavity and the acoustic path, the number and/or arrangement of apertures in

each casing being different and the resonant cavity and the acoustic path being configured so that the acoustic response of the earpiece remains substantially the same irrespective of which casing attached to the device (see figure 1, apertures 40, col.3, In.17-36).

It should be noticed that Hawker fails to clearly teach the casing is interchangeable with one or more other casings each having a plurality of apertures therein for the external transmission of sound from the device. However, Peng teaches such features (see figure 7, col.2, [0022-0024] for a purpose of replacing new the cover.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the casing is interchangeable with one or more other casings each having a plurality of apertures therein for the external transmission of sound from the device, as taught by Peng, into view of Hawker in order to save cost to replace the new cover.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In order to expedite the prosecution of this application, the applicants are also requested to consider the following references. Although Hawker et al. (U.S. Patent No. 6,002,949), Krauss (U.S. Patent No. 6,374,120), Smith (U.S. Patent No. 5,909,498), and Kaschke (U.S. Patent No. 5,999,821) are not applied into this Office Action; they are also called to Applicants attention. They may be used in future Office Action(s). These references are also concerned for supporting the system and method of acoustic guide for audio transducers.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan A. Pham** whose telephone number is (703) 305-4987. The examiner can normally be reached on Monday through Friday, 8:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Curtis Kuntz can be reached on (703) 305-4708 and

IF PAPER HAS BEEN MISSED FROM THIS OFFICIAL ACTION PACKAGE, PLEASE CALL Customer Service at (703) 306-0377 FOR THE SUBSTITUTIONS OR COPIES.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to: (703) 872-9306

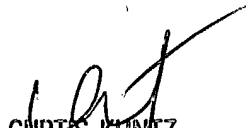
Art Unit: 2643

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Sixth Floor (Receptionist, tel. No. 703-305-4700).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit 2643
October 27, 2004
Examiner

Tuan Pham


CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600